Mathematical Reasoning and Proving for Secondary Teachers

Course Webpage: https://sites.google.com/view/pst-reasoning-and-proof/home

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Course Description

The Mathematical Reasoning and Proving for Secondary Teachers course aims to enhance preservice secondary teachers' (PSTs') knowledge and disposition for integrating reasoning and proof into classroom practices. Through content, methods, and clinical practice, PSTs are able to learn about the importance of the logical aspect of proof and apply it to pedagogical implications. The four aspects of proof utilized for the course are (1) quantification and the role of examples in proving, (2) conditional statements, (3) direct proof and argument evaluation and (4) indirect reasoning. The modules of the course are sectioned by these aspects. PSTs are engaged in opportunities to integrate proof and reasoning into the traditional US curriculum, provided class time to lesson plan, and are shown modeled types of proof tasks for support. Lessons are planned and implemented in Middle or Secondary classrooms. For each lesson PST's record, reflect, receive feedback, and review. Information and resources for each module are provided within each module's webpage (available at the top of home page).

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